

TRIOSTEUM (CAPRIFOLIACEAE) IN TEXAS

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Triosteum is a genus of about six species distributed in eastern North America and Asia. These are coarse, perennial, erect herbs with one to many stems arising from a woody crown. Many authors recognize three species from North America, *T. angustifolium* L., *T. perfoliatum* L., and *T. aurantiacum* Bickn. (Small 1933; Fernald 1950; Steyermark 1963; Radford et al. 1968; Strausbaugh & Core 1978). *Triosteum angustifolium* is characterized by narrowed leaf bases, whereas *T. perfoliatum* and *T. aurantiacum* have connate-perfoliate leaf bases. The latter two are segregated primarily on the nature and amount of pubescence and glandular hairs. Although recognizing the two species, Voss (1996) mentions that "pubescence characters are not as consistent as some keys suggest ..." Brooks (1986) treats them as infraspecific taxa, maintaining that "The characters typically used to distinguish the two varieties, especially stem vestiture and leaf shape, intergrade with some degree of frequency in both the GP [Great Plains] and extraregional material examined. This suggests that separation of the two entities is dubious."

Correll and Johnston (1970), as well as Hatch et al. (1990) and Jones et al. (1997), include only *Triosteum angustifolium* within the flora of Texas. Therefore, the collection cited below is the first report of *T. perfoliatum* (*T. perfoliatum* var. *perfoliatum* sensu Brooks, 1986) in the state. The species is known from MA and NY, west to MN, eastern NE and KS, northeastern OK, south to northern GA, AL, MS and AR (Fernald 1950; Brooks 1986). There is also

one record from Natchitoches Parish in northwestern LA (Thieret 1969; Thomas & Allen 1996).

The Anderson County location, located at the western limits of the Pineywoods, is a mature hardwood-pine forest dominated by *Pinus taeda* L., *P. echinata* Mill. (Pinaceae), *Quercus stellata* Wang., *Q. falcata* Michx. (Fagaceae), *Acer rubrum* L. (Aceraceae), and *Liquidambar styraciflua* L. (Hamamelidaceae). Common understory plants include *Rhynchosia latifolia* Nutt. ex T.&G. (Leguminosae), *Polygala polygama* L. (Polygalaceae), *Oplismenus hirtellus* (L.) Beauv., *Chasmanthium sessiliflorum* (Poir.) Yates (Gramineae), and *Elephantopus carolinianus* Raeusch. (Compositae).

The leaves of the specimen are distinctly panduriform and have margins that vary from entire to conspicuously crenate-sinuate. Small (1933), Fernald (1950), Radford et al. (1968), and Brooks (1986) all report strictly entire leaf margins for all species of *Triosteum* in the United States with the exception of the bases. *Thieret* 26855 (LAF, TEX!), the only Louisiana collection of the species, has similar crenate-undulate margins on some of its leaves.

Voucher specimen. Texas. Anderson Co.: 3 mi WNW of Elkhart at Ivy's Preserve, 9 May 1998, *Singhurst, Fleming, Loper, & Loper* 6832 (BAYLU).

The following key, based upon Texas material, may be used to distinguish between the two species of the genus now known from the state.

1. Flowers yellow, 1 per axil; bracts subtending flowers two, exceeding the length of flowers or fruits; calyx long hirsute, glandular hairs few; bases of midstem leaves narrowed. *T. angustifolium*
1. Flowers reddish to orange, (1-)2 or more per axil; bract subtending flowers one, ca. one-half the length of flowers or fruits; calyx densely puberulent, glandular hairs numerous; bases of midstem leaves perfoliate. *T. perfoliatum*

Triosteum angustifolium occurs from central CT, Long Island (NY), and PA, west to MO, southeastern KS, eastern OK, and east TX, south to GA and northern LA. Correll and Johnston (1970) give the distribution as east Texas, specifically Smith and Cass counties, both within the Pineywoods Vegetational Region. Hatch et al. (1990) list the species as occurring only in the Pineywoods. However, *T. angustifolium* is now known from the northern part of the Pineywoods and also from the northern part of the Post Oak Savannah in Lamar County.

Specimens examined. TEXAS. Cass Co.: between Linden and Avinger, 15 Jul 1969, *Amerson & Watson s.n.* (LL); same location, 3 Aug 1969, *Amerson s.n.* (SMU); 1 mi W of Linden, off Hwy 155, 17 May 1970, *Correll & Correll* 38689 (TEX). Lamar Co.: 500-1000 ft W of Co. Rd. 34950 from a point ca. 1.8 mi NW of its jct with U.S. Rt. 271, ca. 2.9-3.0 air mi NNW of jct. U.S. Rt. 271 and FM 2648 N of Paris, Camp Maxey (Texas National Guard), N 33° 49' 25", W 95° 32' 55", 4 May 1994, *Carr & Wolfe* 13737 (TEX). Smith Co.: Swan, 17 Sep 1902, *Reverchon* 3208 (SMU).

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